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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,265	07/31/2003	Avi Penner	2024750-7015284001	5488

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EXAMINER

LAYNO, CARL HERNANDZ

ART UNIT	PAPER NUMBER
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3766

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/632,265	<b>Applicant(s)</b> PENNER, AVI	
	<b>Examiner</b> Carl H. Layno	<b>Art Unit</b> 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8,13,15-19,21-23,25,26,28,31,36 and 39 is/are rejected.
- 7) ☒ Claim(s) 5,7,9-12,14,20,24,27,29,30,32-35,37,38 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/8/04, 10/14/03</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Information Disclosure Statement*

1. Acknowledgment is made of applicant's Information Disclosure Statement (PTO-1449), which was received by the Office on October 8, 2004 and on October 14, 2003.

### *Drawings*

2. The formal drawings were received on April 26, 2004. These drawings are approved.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6, 8, 13, 15-19, 21-23, 25, 26, 28, 31, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroepel et al (US 5,749,909) (cited by the Applicant).

In regard to claims 1, 2, 13, 15, and 16, the Schroepel et al (US 5,749,909) patent, cited by the applicant as prior art, describes an implantable cardiac pacing system (Fig.1) including a piezoelectric device 20 that generates electrical power/current to charge the medical device's battery 29. Battery 29 uses this energy to provide the electric energy needed to power the pacing circuitry 27 to generate its stimulation outputs. In an embodiment of Fig.6, piezoelectric device

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**200** may comprise an acoustic transducer **220,240** for converting sound waves **150** to electrical energy.

In regard to claim 3, the implantable pacing device of Schroepfel may be equipped with an array of four transducers **40,50,60,70** (Fig.5).

In regard to claims 4, 18, and 26, battery **29** stores the current generated by the acoustic transducer(s).

In regard to claims 5, 6, 8, 9, 19, 21, 22, and 28, pacing circuit **27** performs the function of applicant's claimed "control circuitry" and "switch" since it inherently controls the stimulation energy output (i.e. pulse frequency and on/off times) of the stimulation electrode.

In regard to claim 15-17, applicant's attention is directed to Fig.4, which shows acoustic piezoelectric transducers **40, 50, 60, and 70** on the casing of the pacemaker **30** (col.7, lines 64-66). As stated above, the Schroepfel et al implantable stimulator also comprises pacing control circuitry **27** and stimulating electrodes **34,36** (Fig.1).

In regard to claims 25, 31, and 36, Fig.1 shows an externally located control device **10** capable of transmitting acoustic waves through the patient's skin **99** to an implantable pacemaker **30**, which transforms these waves into energy for outputting stimulation energy to the patient.

5. Claims 1-4, 13, 25, 26, 31, 36, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Mann et al (US 4,082,097).

In regard to claims 1, 2, and 13, the Mann et al (US 4,082,097) patent describes a heart stimulation system (Fig.1) including an implantable pacer (circuitry to the right of skin **10**) (col.3, lines 62-63) including stimulating electrodes **15**, and induction coils **16** for transferring

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energy through the skin. Although induction coils **16** are shown, the device may alternately utilize a piezoelectric crystal to transfer energy by sound waves or vibration (col.4, lines 29-33) from an external charge and control unit **20**. Energy converted by the piezoelectric crystal would be rectified and used to charge battery **12**, whose output is used to power pace pulse generator **14**, which delivers output energy to stimulation electrodes **15**.

In regard to claim 3, the Mann et al implantable pacer reads upon applicant's claimed structure if coils **18**, **28**, and **38** were, alternatively, considered to be piezoelectric crystals, as stated in Mann et al col.4, lines 29-33.

In regard to claims 4 and 26, battery **12** performs the function of applicant's claimed "energy storage device" for storing the electrical current as electrical energy.

In regard to claim 25, external charge and control unit **20** (shown in more detail in Figs.4 and 5) performs the function of applicant's claimed "control device".

In regard to claim 39, the acoustic waves transmitted by the implantable stimulator to the external "control device" **20** comprises information regarding the state of charge of battery **12** (Abstract, lines 8-11).

#### *Allowable Subject Matter*

6. Claims 5, 7, 9-12, 14, 20, 24, 27, 29, 30, 32-35, 37, 38, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

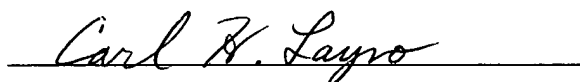
#### *Conclusion*

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl H. Layno whose telephone number is (571) 272-4949. The examiner can normally be reached on 9/4/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, reading "Carl H. Layno", is written over a horizontal line.

CARL LAYNO  
PRIMARY EXAMINER

CHL  
3/16/2006